

Based Upon: PCT/EP2004/001084

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A liquid cooling system having ~~several~~ cooling units (4), ~~which are~~ individually assigned to electronic component groups (1), ~~which are~~ housed in a rack (2) or a switchgear cabinet and ~~[[are]]~~ to be cooled, and ~~furthermore~~ having a monitoring and control arrangement (9) for monitoring ~~[[the]]~~ a cooling temperature, the liquid cooling system comprising:

~~characterized in that~~

the cooling units (4) ~~are embodied as~~ being liquid cooling units and ~~[[are]]~~ connected via branch points (5.1) to a common central liquid line system (5) integrated into the rack (2) or the switchgear cabinet~~[[,]]~~; and

the ~~control and~~ monitoring and control arrangement ~~is embodied for~~ monitoring the cooling temperature in the central liquid line system (5) and ~~[[for]]~~ emitting an error signal when one of a ~~predetermined or~~ predeterminable threshold temperature in a liquid return branch (5.3) is exceeded, ~~[[or]]~~ a ~~predetermined or~~ predeterminable threshold temperature difference between an inlet ~~[[a]]~~ temperature in an inlet branch (5.2) and a return temperature in the return branch (5.3) is exceeded, ~~or when the~~ and a liquid flow falls below a ~~predetermined or~~ predeterminable threshold value.

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2. (Currently Amended) The cooling system in accordance with claim 1, ~~wherein characterized in that the~~ an error signal ~~is used for triggering at least one of triggers~~ an alarm ~~and/or for switching and switches~~ off a common electric current supply for all electronic component groups (1).

3. (Currently Amended) The cooling system in accordance with claim ~~[[1 or]]~~ 2, ~~wherein characterized in that~~ the cooling units (4) have cooling elements through which coolant flows, ~~which~~ and are thermally connected to temperature-sensitive, heat-producing electronic components.

4. (Currently Amended) The cooling system in accordance with ~~one of the preceding claims, characterized in that~~ claim 3, wherein the central liquid line system (5) has a line unit (5.4) ~~provided~~ with an inlet conduit and a return conduit~~[[,]]~~ which is mounted vertically ~~oriented~~ in the rack (2) or the switchgear cabinet and ~~is provided~~ has over ~~[[its]]~~ a length ~~with coupling means, preferably equidistantly arranged, couplers~~ for forming the branch points (5.1).

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5. (Currently Amended) The cooling system in accordance with ~~one of the preceding claims, characterized in that~~ claim 4, wherein a section of the central liquid line system (5) extending in the rack (2) or the switchgear cabinet is attached to one of a vertical frame leg, ~~[[to]]~~ at least one mounting rail, ~~or to the~~ and an inside of a lining element.

6. (Currently Amended) The cooling system in accordance with claim 5, wherein ~~characterized in that~~ a receptacle~~[[,]]~~ is open over ~~[[its]]~~ a receptacle length toward ~~[[the]]~~ an interior of the rack (2) or the switchgear cabinet~~[[,]]~~ and is integrated one of on ~~[[or]]~~ and into the frame leg~~[[,]]~~ into which ~~[[the]]~~ a section of the central liquid line system (5) is inserted.

7. (Currently Amended) The cooling system in accordance with ~~one of the preceding claims, characterized in that~~ claim 6, wherein the central liquid line system (5) is connected to at least one of an air/liquid heat exchanger (8) ~~and/or~~ and a liquid/liquid heat exchanger (6).

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8. (Currently Amended) The cooling system in accordance with claim 7, wherein ~~characterized in that~~ the liquid/liquid heat exchanger (6) is connected to a recooling arrangement (7).

9. (New) The cooling system in accordance with claim 1, wherein the cooling units (4) have cooling elements through which coolant flows and are thermally connected to temperature-sensitive, heat-producing electronic components.

10. (New) The cooling system in accordance with claim 1, wherein the central liquid line system (5) has a line unit (5.4) with an inlet conduit and a return conduit which is mounted vertically in the rack (2) or the switchgear cabinet and has over a length couplers for forming the branch points (5.1).

11. (New) The cooling system in accordance with claim 1, wherein a section of the central liquid line system (5) extending in the rack (2) or the switchgear cabinet is attached to one of a vertical frame leg, at least one mounting rail, and an inside of a lining element.

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12. (New) The cooling system in accordance with claim 11, wherein a receptacle is open over a receptacle length toward an interior of the rack (2) or the switchgear cabinet and is integrated one of on and into the frame leg into which a section of the central liquid line system (5) is inserted.

13. (New) The cooling system in accordance with claim 1, wherein the central liquid line system (5) is connected to at least one of an air/liquid heat exchanger (8) and a liquid/liquid heat exchanger (6).

14. (New) The cooling system in accordance with claim 13, wherein the liquid/liquid heat exchanger (6) is connected to a recooling arrangement (7).